ARCADIAN

Vol 5 No 1 Nov 5, 1982

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IN THE NEWS I There have been a number of items about Astrocade in the press. The first was the Don Dorfman column of October 14, which cast some gloom on Astrocade fortunes. A few days later, Nitron had a release saying they were thinking of buying Astrocade, and then on October 19, there was a second release saying that they had made the arrangements to buy a controlling interest. Our contact with Nitron recently indicates that they are studying their position and are not ready to make any statements as to plans. Of course, they have to sell all their products to recoup the moneys expended and borrowed, so the Arcade and Videocade production has to be maintained. The question we hard-core diehards have has to do with the added memory long promised by Arcade management. The system can be described currently as at a "T - 3 months and holding" situation. Copies of the news items mentioned above will be found on page 3.

IN THE NEWS II At the consumer level, the press for the Arcade has been exceptionally good recently. Reviews of Videocades in VIDEOGAMING and ELECTRONIC GAMES magazines of Wizard and Pirate's Chase - an excellent appraisal in CONSUMER REPORTS publication - and even our local paper had some good words. (It was an interview with Arnie Katz of Electronic Games, where he was talking about three levels of memory/sophistication. His comment follows.

A second system, Astrocade, dramatically illustrates the fervor of video game players. According to Katz, Bally Midway, the arcade game company, launched the Astrocade home system a few years ago, then withdrew it in the face of stiff competition. But the faithfuls who owned and loved the home systems wouldn't stand for that. They actually *designed new games* for Astrocade in order to keep it alive! And finally, a new company (Astrocade, Inc.) emerged, bought Bally's rights and put the system back on the market at about $200. Asks Katz: "Can you think of any other retail industry where that would happen?" A new system, due on the market before Christmas, overlaps from Level II into Level III.

Note that the 'faithfuls' mentioned are our subscribers and advertisers. And one of our advertisers, Alternative Engineering, has had a mention in the current CREATIVE COMPUTING New Products section (p.352)

FUNNY LETTERS IN LISTINGS Because of some peculiarities of the signals going from my Arcade to my printer, some symbols do not appear at the printhead. As a result, you will see some lower-case letters now and then. We are attempting to hand-correct these in this Volume, but I'm sure there will be some slip-ups, or a program from an outside contributor may have the same 'problem'. At any rate, here are the codes:

a = →
b = x
c = ÷
— = ←
› = ↓

INPUTS NEEDED We are always in need of program material - of all types. We can publish longer programs for the use of subscribers with extended memories now, so lets see something complicated!

USER GROUP CORNER It is very advantageous for the new Arcade owner to join a User Group in his area should one exist. The opportunity to ask questions and obtain information can be invaluable. A small number have been created over the years, and we would like to further the cause of such mutual benefit societies by providing an area in the ARCADIAN to identify existing and proposed groups. A list of persons interested in forming a User Group in their respective locales is appended. If you want information about starting your own Group, send a $2 donation to Peggy Gladden, 59400 Nine Mile Rd., South Lyon, MI 48178 and receive some material the Michigan Astrobugs put together. The Bugs will have a meeting on Nov 14 - call 437-3984 for details.

The Los Angeles group will have another meeting on Nov. 13 in El Monte - call Mark at 443-4189

Frank Gfeiner Timber Route Box 180, Vernonia, OR 97064

Barbara Vann 4129 Lynn Burke Rd., Monrovia, MD 21770

Jim Fauci 1200 Sapphire S.W., Albuquerque, NM 87105

Jerry Mullins 5808 Dogwood Godfrey, IL 62035

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Jim Butts, 322 Roxbury Rd., New Britain, CT 06053

R. Miller 9051 Tennyson Westminster CO 80030

Larry Fuglaar, 2336 Alex Korman Blvd., Harvey, LA 70058

Pat Wilson 441 Parkside Dr., Troy, IL 62294

TROUBLE SHOOTER We have occasional need for a program trouble-shooter. This would be a person who would receive some subscriber's tape of a published program - one that doesn't work for the subscriber - and resolve the problem. Perhaps some explanation of the solution that could be entered in the ARCADIAN, that would help others, could be generated. If interested, let me know.

SCHEDULE FOR ARCADIAN PRODUCTION for the next year has been set. The last day for the receipt of any materials is the Tuesday that falls between the 17 and 24 of the month. The issue will be in the mail 10 days later, a Friday. This schedule allows a couple of days to accommodate the Postal Service's requirements for bundling of mail by various zip codes and the weird calculations needed to determine the postage.

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Video game death could put supplier on ice

CHICAGO TRIBUNE OCTOBER 14,1982

Dan Dorfman

THE EXPLODING video games industry could get its first major fatality: privately held Astrocade [formerly Astrovision] of Columbus, Ohio.

That could mean a potential bloodbath for investors in a hot over-the-counter number, Nitron Inc. of Cupertino, Calif.

It could also prove to be a major embarrassment to Quaker Oats Co.

Astrocade in August of '80 acquired the rights to the home video game business of Bally Mfg. Co. for $2.3 million; its most vital corporate tie is to Nitron, which has a $108 million contract to supply video game products to Astrocade in '82 and '83; $76 million of that amount is for next year.

A robust market performer brought public by defunct John Muir & Co. at $5 a share in '80, Nitron is a semiconductor manufacturing spinoff from McDonnell Douglas, which in turn owns 22 percent of Nitron. The lion's share of Nitron's growth, plus a significant degree of its financial stability, strongly hinges on its ties to Astrocade.

Nitron's stock, after a run to $17.75, was trading at press time at around $13.50 in the over-the-counter market.

THAT'S QUITE a fancy price tag, considering that the company has lost more than $1 million a year three years running [including a fiscal '81 loss of $3.4 million on sales of $7.8 million] and has managed to eke out earnings of just 6 cents a share in the first nine months of fiscal '82. In addition, the semiconductor industry is in the throes of a semi-depression.

Obviously, then, Wall Street is expecting big bucks from Nitron from the video game craze.

Quaker Oats got into the act last May when it coughed up $3 million for a 13 percent interest in Astrocade [possibly with an eye toward acquiring it later]. The food company had an option to change its mind, which it subsequently did, and now it's waiting for the return of the $3 million.

Alas, that's easier said than done. Astrocade used the money to retire part of its debt. More importantly, sources very close to the management of Astrocade, which is in hock for about $11 million, tell me that the nearly 2½-year-old company could be forced into bankruptcy in the next 45 days if it fails to get a fresh and sizable injection of new capital to finance the business.

In response, Astrocade chief Roger Greenman tells me he just returned from London where he negotiated and hopes to conclude an agreement by mid-November for a $6 million investment in the company.

QUESTIONS ARE raised about the viability of the company even if he does get the money. Already, there are widespread fears of industry saturation. Competition is stiff, and inroads into video game hardware by personal computers are likely. Then, too, there's the need for advertising dollars to retain market share.

The current Astrocade crisis is a far cry from the bullish talk the company was spouting about a year ago. At the time, its cocky management talked of '81 sales of upward of $15 million; they were actually around $9 million. Further, '82 sales were projected to be at least $100 million, with net profit running around $10 million. Again, the estimates are high. One source figures Astrocade sales will be about $22 million this year, and he says profits, maybe, could reach $250,000.

The immediate question, though, is not the vigor of Astrocade's business, but its ability to survive. As one source intimately involved in the company's affairs put it: "There's now a major question of whether Astrocade will be able to refinance . . . and if it doesn't, it's almost certainly goodbye."

THE WORD I GET is that Astrocade, basically, insolvent with a negative net worth of about $1 million, is unable to meet its payments to Nitron. As of Sept. 30, it owed Nitron about $2 million. On top of this, Nitron, which is now estimated to do roughly half of its business with Astrocade, could be billing the ailing company for another $15 million for the products it will have produced for the balance of this year.

All of this raises an obviously critical question: Does Nitron, which has a negative net worth after factoring in the possible redemption of its preferred shares, have the necessary cash flow to carry Astrocade on a sustained basis?

Sources close to Astrocade say no.

What does Nitron have to say about its financial health?

Nothing! Nitron chairman Sam Nissim, viewed by several Wall Streeters as a promoter and stock tout and usually eager to talk up his company, refused to respond to several calls.

HOWEVER, A CLUE to Nitron's financial stability may be found in an unsettling statement issued by its auditor, Arthur Young & Co. After examining the fiscal '81 and '82 balance sheets, the accounting firm cautioned that Nitron's ability to continue as a going concern was dependent on a number of future developments, including its ability to obtain sufficient working capital to finance continued operations.

Despite the ominous clouds, Nitron's stock boasts a super 40-plus price-earnings multiple, based on Street fiscal '82 earnings estimates of around 30 cents a share. Considering that two giants in the video game field, Warner Communications and Mattel, sport respective multiples of only about 8 and 5, one has to marvel at tiny Nitron's investment magic. If accorded the 8 multiple of a super earnings grower like Warner's, Nitron's stock would be selling at $2.40 a share.

It may well be, as one knowledgeable source on Nitron put it, that "sanity has never been a qualification of Wall Street investing, but where insanity is involved, it never lasts forever."

The reply from Nitron

When contacted by the Mercury News late Wednesday, Nitron chairman Samuel Nissim rejected criticisms leveled by columnist Dan Dorfman.

Nissim confirmed that Astrocade owes Nitron $2 million, but he said Nitron will be repaid "in full within 30 days."

Nissim said the money was not paid on time because a badly needed cash infusion into Astrocade was delayed. "I expect the infusion will occur shortly," Nissim said.

In reacting to Dorfman's reference to Nitron's high price-earnings ratio, Nissim said, "Some semiconductor companies in their formative stages have enjoyed high P-E ratios. We are in the semiconductor business, not the video games business."

Nitron acquires control of ailing video games firm

Semiconductor maker Nitron Inc. of Cupertino said Tuesday it has acquired a controlling interest in Astrocade, an ailing video games firm.

Financial terms were not disclosed, but Nitron said the deal involves an exchange of Nitron stock for stock of privately held Astrocade of Columbus, Ohio.

Nitron is Astrocade's largest supplier, providing game consoles and game cartridges to the firm. It was disclosed last week that Astrocade was having difficulty repaying $2 million it owed Nitron. The deal must be approved by certain creditors of Astrocade.

The deal will involve a cash infusion into Astrocade from unidentified sources, Nitron said.

In addition, Nitron said it has reached agreement to obtain additional short-term working capital dependent upon "certain banking accommodations" to permit the firm to continue shipping video products to Astrocade through the current fiscal quarter.

This is the official NITRON press release that is referred to in the article, lower left.

CUPERTINO, CALIFORNIA, OCTOBER 19, 1982 . . . NITRON, INC. (NASDAQ:NITR), announced today that following additional discussions held in Chicago, Illinois, on Friday, October 15, 1982 an Agreement has been entered into whereby Nitron will acquire a controlling position in Astrocade in exchange for Nitron shares. Astrocade is a privately held company involved in the software development and marketing of home video consoles and video game cartridges. Nitron is and has been since early this year the principal supplier of consoles and game cartridges for Astrocade. Astrocade is Nitron's largest customer and a licensee of Bally Manufacturing Company. The terms agreed by the interested parties are subject to completion and finalization of the necessary documentation, approvals and conditions including employment incentives and approvals by certain creditors of Astrocade. The final agreement, as stated previously, will involve infusion of equity capital into Astrocade from other sources.

Nitron has also reached agreement for obtaining additional short term working capital dependent on certain banking accommodations to allow for substantial shipment of video game cartridges and consoles through the current fiscal quarter.

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WHO'S WHO???

THIS COLUMN WILL BE A REGULAR FEATURE IN THE ARCADIAN TO INTRODUCE YOU TO SOME OF THE PEOPLE WHO HAVE WORKED WITH THE ASTROCADE TO HELP MAKE IT WHAT IT IS TODAY. THIS MONTH WE WOULD LIKE YOU TO MEET MIKE PEACE, THE MAN BEHIND "WAVEMAKERS", THE NUMBER ONE SOFTWARE SUPPLIER FOR THE ARCADE.

WE ASKED MIKE HOW HE GOT INVOLVED WITH THE ARCADE. "WELL, I WAS IN THE MARKET FOR A VIDEO GAME THAT I COULD PLAY "SPACE INVADERS" ON, SINCE I WAS ADDICTED TO THAT GAME, AND ENDED UP BUYING THE ASTROCADE. (THEN BALLY) AFTER PLAYING THE GAMES FOR A WHILE AND GETTING A BIT BORED WITH THEM, I TOOK OUT THE BASIC CARTRIDGE AND STARTED PLAYING AROUND WITH IT. WOW!! YOU CAN ACTUALLY CHANGE THE COLORS WITH SIMPLY TYPING "BC="!! ANYWAY, AS MOST OF YOU KNOW, IT BECAME ADDICTIVE. I HAD AN OLD "FLYING ACE" GAME IN THE BASEMENT, AND DECIDED TO WRITE A PROGRAM THAT WOULD PLAY THE GAME. THAT WAS MY FIRST PROGRAM. THEN, I WROTE "MAX-ROBOT" AND "HORSE RACE" AND DECIDED TO TRY OFFERING THEM FOR SALE. I CONTACTED FRED CORNETT AND BOB FABRIS AND ENDED UP SELLING ENOUGH TO JUSTIFY DOING MORE PROGRAMS. THAT IS HOW "WAVEMAKERS" WAS STARTED."

MIKE, SINCE THEN HAS PROGRESSED TO THE POINT OF HAVING 14 DIFFERENT TAPES AVAILABLE, ALL OF WHICH WE'VE SEEN AND RECOMMEND, AND HE IS PRODUCING NEW GAMES ALL THE TIME. I ASKED HIM WHAT HIS CRITERIA WAS FOR MAKING A GAME, AND HERE ARE SOME OF THE RULES HE FOLLOWS:

1-MUST BE EASY TO PLAY. (NOT SO COMPLICATED THAT IT TAKES MORE TIME TO FIGURE OUT HOW TO PLAY THE GAME THAN IT DOES TO PLAY IT.)

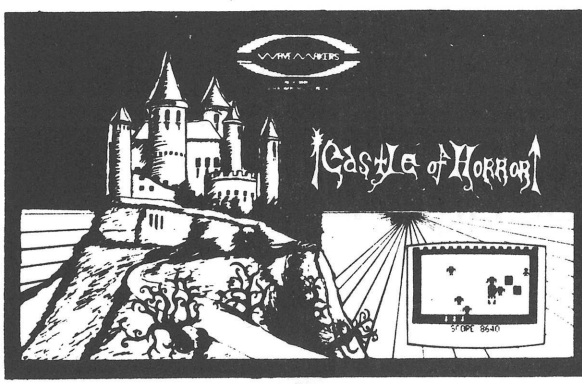
2-YOU SHOULD NOT GET KILLED RIGHT AWAY SO THAT YOU JUST GET FRUSTRATED TRYING TO PLAY.

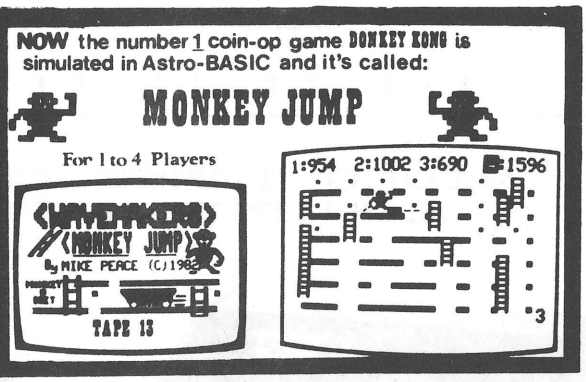
3-A GOOD GAME SHOULD HAVE INCREASING LEVELS OF DIFFICULTY, TO ADJUST ITSELF TO THE SKILL OF THE PLAYER.

4-TRY TO MAKE A GAME HAVE ONE TO FOUR PLAYER CAPABILITIES, SO THAT THE PLAYER HAS THE CHOICE. THERE ARE A LOT OF SINGLE PEOPLE OUT THERE THAT HAVE THE ASTROCADE THAT DO NOT HAVE ANOTHER PLAYER AROUND ALL THE TIME.

ONE THING WE CAN MENTION IS THAT MIKE HAS JUST FINISHED MODIFYING SOME OF HIS OLDER GAMES TO UPDATE THEM AND IMPROVE THEM. THE GAMES THAT ARE UPDATED ARE:"HORSE RACE", "FLYING ACE","SLOT MACHINE","THE MOUSE IN THE HAT","PACK RAT II", AND "CASTLE OF HORROR". IF YOU HAVE ANY OF THESE IN THE OLDER VERSIONS, HE WILL UPDATE THEM FOR $6.00 EACH IF YOU SEND HIM THE OLD TAPE. NOTE-THESE ARE ASTRO BASIC ONLY VERSIONS. (THE UPDATED GAMES). SO IF YOU ONLY HAVE THE OLD BALLY BASIC, YOU WILL NOT BE ABLE TO RUN THE NEW GAMES. (ASTRO BASIC IS THE CARTRIDGE WITH THE L.E.D. AND IN/OUT JACK ON IT.)

OUR THANKS TO MIKE FOR HELPING SO MUCH TO PUT THE ASTROCADE ON TOP!!!! KEEP UP THE GREAT PROGRAMMING!!!





*001. Max (Robot from Space)/Horse Race
*002. Clue/Flying Ace
003. Maze Race/Obstacle Course/Space Chase
*004. Slot Machine/Perversion
005. Music Composer/Yahtzee
*006. Mouse in the Hat/ Speed Math
007. Guitar Course/Tuning/Progressions
008. Backgammon/Obstacle Course Tournament
*009. Pack-Rat/ Pack Rat II
010. Lookout for the Bull I & II
011. Whiz Quiz (Trivia)
012. Castle of Horror/Four Famous Freebees
013. Monkey Jump
014. Collision Course
015. Character Analysis
016. Dungeons of Dracula

*All underlined games have been improved with either machine graphics or speedier routines.

CHRISTMAS SALE PACKAGES

ALL WAVEMAKERS TAPES WILL BE ON SALE UNTIL DEC. 15TH.

To take advantage of this sale just order 5 different tapes (up to $70.75 value) and pay the low price of
$39.95 + $2.50 Postage

YOU MUST ORDER 5 DIFFERENT TAPES (NO DOUBLES)

SEND $42.45 CHECK OR MONEY ORDER TO:
WAVEMAKERS SALE, Box 94801,
SCHAUMBURG, IL. 60193

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VIPER SYSTEMS

ALTERNATIVE ENGINEERING CORPORATION
P.O. BOX 128 GARDINER, MAINE 04345

LIST PRICE SCHEDULE
EFFECTIVE 1 OCT,'82

VIPER SYSTEM COMPONENTS:	
16K VIPER SYSTEM 5 (WITH VIPERSOFT BASIC ON TAPE)	375.00
32K VIPER SYSTEM 5 (WITH VIPERSOFT BASIC ON TAPE)	450.00
16K VIPER SYSTEM 1 (WITH VIPERSOFT BASIC ON TAPE)	275.00
VIPER SYSTEM KEYBOARD	175.00
VIPER OPTIONAL EQUIPMENT:	
VIPER 16K RAM CARD. (REDUCED)	125.00
SYSTEM 1 TO 5 UPGRADE PACKAGE	135.00
VIPER 4 CHANEL RS-232 INTERFACE	170.00
VIPER KEYBOARD EXTENSION CABLE.	15.00
HOBBYIST PACKAGES:	
SYSTEM 1 BARE BOARD KIT	95.00
SYSTEM 1 CABLE KIT.	35.00
VIPER KEYBOARD BARE BOARD KIT	75.00
VIPER SYSTEM CABINET.	60.00
VIPER KEYBOARD CABINET.	50.00
HEADWARE ROM CARTRIDGES:	
VIPERSOFT BASIC OPERATING SYSTEM.	75.00

PLEASE ADD 5.00 SHIPPING & HANDLING PER ORDER

* *

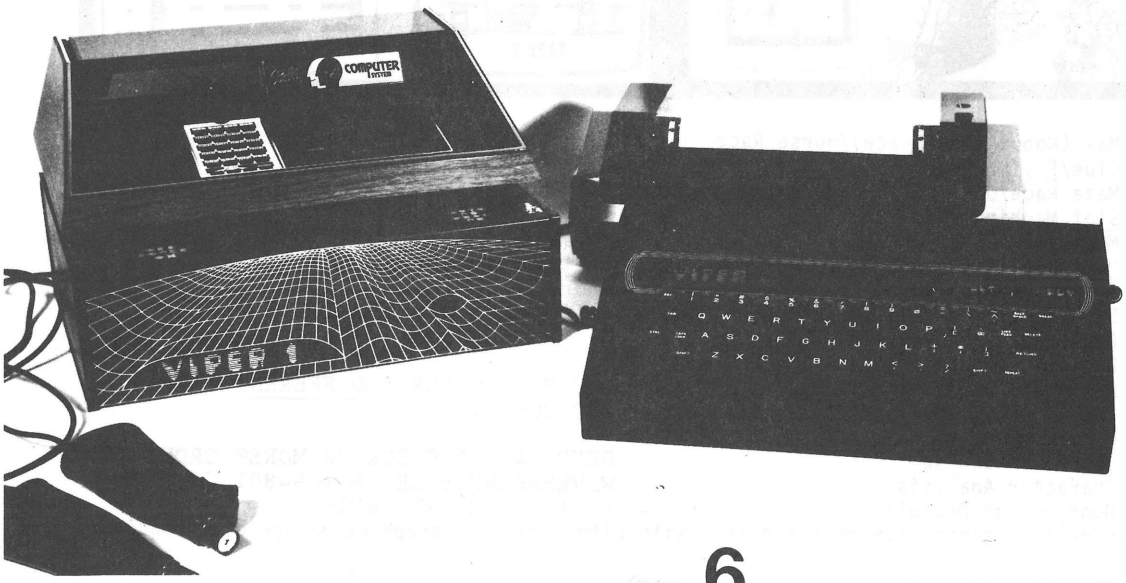
ORDERING INFORMATION

ORDERS PRE-PAID BY MONEY ORDER OR CERTIFIED CHECK WILL BE PROCESSED FIRST. PERSONAL CHECKS MAY DELAY PROCESSING BY UP TO TWO WEEKS. SORRY, NO C.O.D. ORDERS MAY BE ACCEPTED AT THIS TIME.

PLEASE ALLOW 4 TO 6 WEEKS FOR DELIVERY.

* *

VIDEO IMAGE PROCESSING EQUIPMENT RESEARCH



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20 M=@(R)÷1000;P=RM÷10;T=RMx10;Q=@(R+1)÷10000
30 T=T+Q;Z=RM÷100;A=RM;B=@(R+2)÷1000;C=RM÷10;F=RMx10
40 Q=@(R+3)÷10000;F=F+Q;U=RM÷100;D=RM
50 SM=0;CLEAR ;PRINT "ROOM:       ",R÷4;PRINT "STRENGTH:   ",S
60 PRINT "EXPERIENCE:",E;PRINT "ENEMY  :    ",M
70 IF W=1PRINT #14,"TRAP:",P
80 PRINT "EXITS LEAD:",
90 IF A=1PRINT "N",
100 IF B=1PRINT "S",
110 IF C=1PRINT "E",
120 IF F=1PRINT "W",
130 IF U=1PRINT "U",
140 IF D=1PRINT "D",
150 SM=2;CY=-40;PRINT ;INPUT "ACTION?"N
160 IF N=1GOTO 210
170 IF N=2L=L+1;GOTO 350
180 IF Y>S S=S+Y÷5
181 IF M>0PRINT " ENEMY ATTACKS!";S=S-(Z÷4);GOTO 186
185 IF RND (9)=3GOTO 200
186 GOSUB 700
190 GOTO 150
200 M=1;Z=S+E÷2;GOTO 50
210 IF (M>0)+(T>0)=0GOTO 150
211 IF E÷3+S>ZGOTO 240
220 I=Z;Z=Z-(E+S)÷5;S=S-I÷6;GOSUB 700;GOTO 150
240 PRINT "ENEMY KILLED!";S=S-Z÷9;Z=0;M=0;E=E+1;GOSUB 700
250 CY=-40;SM=1;IF T>0PRINT "GET TREASURE?";GOTO 260
255 GOTO 50
260 Q=KP;IF Q=89GOTO 280
270 GOTO 50
280 IF P>0GOTO 300
290 CY=-32;PRINT #5,"TREASURE:",T
291 IF T=1 W=1
292 IF T=2 S=S+5;Y=Y+5
293 IF T=3E=E+5
294 IF T=90;SM=0;PRINT "THE CROWN OF ZEUS!!!    ";G=G+500;GOTO 600
295 G=G+T;T=0
296 GOTO 50
300 PRINT " TRAP!!! TYPE:",P;S=S-P;P=0;GOSUB 700
320 GOTO 290
350 PRINT "DIRECTION?",
351 @(R)=(T÷10)+Px10+Mx1000;@(R+1)=A+Zx100+RMx10000;S=S-Z÷6
360 Q=KP;GOTO 800+Qx2
500 CY=-24;PRINT "YOU'VE BEEN KILLED!"
600 SM=0;PRINT "SCORE:",G-L;STOP
700 CY=32;CX=-11;PRINT S;IF S<0GOTO 500
710 RETURN
936 IF D=1R=R+24;GOTO 20
937 GOTO 1000
938 IF C=1R=R+4;GOTO 20
939 GOTO 1000
956 IF A=1R=R-48;GOTO 20
957 GOTO 1000
966 IF B=1R=R+48;GOTO 20
967 GOTO 1000
970 IF U=1R=R-24;GOTO 20
971 GOTO 1000
974 IF F=1R=R-4;GOTO 20
1000 PRINT "NOT AN EXIT";GOTO 150
```

AB only

Todd Johnson
E 12804 23rd St.
Spokane, WA 99216

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ARCADIAN

Vol 5 No 1 Nov 5, 1982

THE CROWN OF ZEUS

Created by Todd Johnson

This program takes you to a dark decaying castle in the evil land of Scrom. You've been asked, as the best warrior in the land of Beekum, to retrieve the Crown of Zeus which the Scromites have stolen. The crown, when worn, gives the wearer the awesome ability to cause anything he or she wishes to vanish. Apparently the Scromites have not yet discovered the crown's powers. But as you hid in the forest outside the castle, you saw a troop of orcs from the warring land of Machor slip in through the front gate. They surely know the power of the crown and will have to be dealt with...

To play "The Crown of Zeus" first enter the entire program into the computer. It takes up almost all the memory so leave out any spaces that are not inside quotes. When this is done, type (without line number) CLEAR:FOR A=0 TO 191:PRINT"@(",#1,A,")=",:INPUT""@(A):NEXT A GO. Now input each value for levels 1 and 2 as they are asked for.▲ When this is done type S=5:E=5:Y=5:R=24:L=0:G=0:W=0 GO. Now load all of this onto tape using :PRINT. When the program has finished being loaded onto the tape, type in the little program above once again and input the values for the 3rd and 4th levels as you did for the first two levels.● Then save this array on your tape with :PRINT @(0),192 making sure to leave a little blank tape between the main program and this array. Now rewind your tape and input the main program with :INPUT. Say RUN and you're on your way. The computer will print:

ROOM:
STRENGTH:
EXPERIENCE:
ENEMY:
EXITS LEAD:

ACTION?

Keeping strength above zero is the key to this game. You can survive a negative strength value as long as its not too much negative and there is not an enemy in the room, but generally a negative strength value means you're dead. Strength can be increased to its maximum by resting. Finding a magic sword in the castle will also increase your strength and increase your maximum strength too.

The number after ENEMY: is a code number which tells you which enemy from the enemy list is in the room.

EXITS LEAD: tells you which directions, (north,south,east,west,up,down), you can go. ACTION? prompts you to enter the number code for the action you wish to take from the action list.

When you reach a room that has no exit, you are at the entrance to level 3. If you wish to enter this level, press HALT then type R=R-24;:INPUT @(0),192 GO and press the play button on your recorder to load the array for the next levels. Then RUN the program and you're on level3. If instead you want to stay on level 2 a little longer, type HALT then type R=R-24;RUN GO and you'll be back up the stairs. This program must be reloaded after you are killed or find the crown since the data in the array gets altered. If you want to quit for awhile during a game you can save it by halting it and loading it onto a blank tape. Also, you don't have to get any treasure at the time you are asked by the computer. If you wish to get it later just press 1 when asked for an action and the computer will let you get the treasure.

ENEMIES

0 nothing
1 Orc(s)
2 Killer Bees
3 Rats
4 Skeleton
5 Ghost
6 Zombie
7 Bear
8 Wolf
9 Black Knight
10 Giant Viper
11 Giant Spiders
12 Minotaur
13 Goblin
14 Tiger
15 Evil Warlock
16 Evil Sorceror
17 Evil Wizard
18 Mummy
19 Dragon(small)
20 Dragon(medium)
21 Dragon(large)
22 Dragon(immense)
23 Demon
24 Giant
25 Giant Slime Monster
26 Orange Blob
27 Fire Fiend
28 5-headed Hydra
29 Cyclops
30 Demon King

ACTIONS

1 Fight
2 Leave Room
3 Rest

AB only

TREASURE

1 Magic Wand
(detects traps)
2 Magic Sword
(increases strength)
3 Magic Helm
(increases experience)
90 The Crown!
All other numbers refer
to gold pieces.

TRAPS

1 needles shoot at you
2 small rocks fall on you
3 a pit opens beneath you
4 poisonous gas fills room
5 crossbow bolt hits you
6 you receive electrical shock from treasure

▲ This array is on page 9

● This array is on page 10

****
* THE CROWN OF ZEUS is the first in a series of programs that take place on the planet Gibeleous. Others now available are:
* THE RESCUE OF CATHERINE:
* After you went to save the crown, the Scromites became angry with you and have kidnapped Catherine, the princess of Beekum, hoping that you will be sent to save her. They've set some traps so Watch Out!
* ESCAPE FROM RANTANAM IV:
* You've been captured by mechanical aliens who have come to Gibeleous for unknown reasons. You must escape and warn the leaders of Beekum.
* THE TOWER OF MACHOR:
* The orcs are after you again in this one with 8 levels. You must destroy the alien computer which has been leading the orcs in their quest for domination of Gibeleous.
* You can get all three great programs on one cassette tape with complete descriptions and instructions for the low low price of only $10.00! To add these programs to your Gibeleous series collection send check or M.O. to:
* Todd Johnson
* E. 12804 23rd
* Spokane, WA 99216
* Wash. residents please add 5.9% sales tax.
* (AstroBasic only)
****

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0	0
1	0
2	0
3	0
4	3001
5	2000
6	10
7	0
8	0
9	0
10	1010
11	10000
12	11011
13	2800
14	10
15	10000
16	18000
17	23200
18	10
19	10000
20	0
21	0
22	1000
23	10000
24	0
25	0
26	1010
27	0
28	8000
29	0
30	10
31	10000
32	0
33	0
34	1010
35	10000
36	7001
37	1500
38	1010
39	10000
40	3000
41	800
42	10
43	10000
44	0
45	0
46	1000
47	10000
48	0
49	0
50	1010
51	0
52	9000
53	3000
54	0
55	10001
56	0
57	1
58	1000
59	0
60	0
61	0
62	0
63	0
64	9000
65	2000
66	1000
67	1
68	5021
69	2401
70	0
71	0
72	2000
73	601
74	1000
75	0
76	0
77	0
78	0
79	0
80	11030
81	21201
82	10
83	0
84	0
85	1
86	0
87	10000
88	9000
89	2000
90	10
91	100
92	10011
93	31801
94	1000
95	10000
96	13011
97	3201
98	10
99	0
100	10000
101	32000
102	1010
103	10000
104	6005
105	2501
106	10
107	10000
108	0
109	0
110	1000
111	10000
112	0
113	1
114	1000
115	0
116	0
117	0
118	0
119	0
120	1001
121	1001
122	1010
123	0
124	0
125	0
126	1010
127	10000
128	14021
129	31900
130	10
131	10000
132	3001
133	21400
134	1000
135	10000
136	0
137	0
138	1010
139	0
140	13000
141	11701
142	1000
143	10000
144	0
145	0
146	0
147	0
148	15056
149	23401
150	10
151	0
152	0
153	0
154	10
155	10000
156	4021
157	22401
158	10
159	10000
160	2000
161	1801
162	0
163	10000
164	0
165	0
166	0
167	0
168	10021
169	1201
170	10
171	0
172	13002
173	1201
174	0
175	10000
176	0
177	0
178	0
179	0
180	12020
181	32201
182	10
183	0
184	8000
185	1201
186	10
187	10000
188	7022
189	1801
190	0
191	10000

These are the entries for

Levels One and Two

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These are the entries for Levels Three and Four

0	19050						
1	23000	51	0	101	3000	151	10000
2	1010	52	9000	102	0	152	11004
3	0	53	22001	103	10000	153	3500
4	24005	54	1010	104	0	154	10
5	3000	55	10000	105	0	155	10000
6	10	56	15013	106	0	156	17030
7	10000	57	23500	107	0	157	14901
8	4023	58	10	108	0	158	10
9	4000	59	0	109	1	159	10000
10	10	60	18000	110	1000	160	-21266
11	10000	61	24501	111	0	161	-20296
12	23006	62	1010	112	19046	162	0
13	5000	63	10000	113	4801	163	10000
14	1000	64	20035	114	1010	164	0
15	10000	65	6001	115	0	165	0
16	6001	66	1010	116	24008	166	0
17	24500	67	10000	117	25001	167	0
18	1010	68	20007	118	0	168	-19266
19	0	69	5500	119	10000	169	-18746
20	9001	70	1000	120	21048	170	132
21	4500	71	10000	121	7001	171	0
22	0	72	23005	122	1000	172	24027
23	10001	73	-29840	123	0	173	7500
24	26000	74	132	124	0	174	10
25	27500	75	0	125	0	175	10000
26	1010	76	29058	126	0	176	23066
27	0	77	8500	127	0	177	7000
28	23008	78	10	128	-17734	178	10
29	5500	79	10000	129	-27946	179	10000
30	10	80	28060	130	0	180	22000
31	10000	81	29000	131	0	181	28200
32	25056	82	1010	132	0	182	10
33	7200	83	10000	133	0	183	10000
34	10	84	27030	134	0	184	25017
35	10000	85	28500	135	0	185	17401
36	21008	86	10	136	-22376	186	10
37	6500	87	10000	137	-19296	187	-27776
38	10	88	23008	138	-32272	188	-19776
39	10000	89	7000	139	0	189	-19202
40	23065	90	1000	140	24017	190	0
41	6000	91	10000	141	26801	191	10000
42	10	92	23004	142	1000		
43	10000	93	6201	143	0		
44	9000	94	1000	144	16060		
45	5000	95	0	145	24001		
46	1000	96	10052	146	10		
47	10100	97	22501	147	0		
48	0	98	1010	148	-21266		
49	1	99	0	149	-30520		
50	1000	100	5000	150	132		

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PLAIN BASIC TALK by Ken Lill

AN EDITORIAL SERIES FOR NON-HACKERS THAT WANT TO KNOW HOW & WHY

Article #1: Picture Element (PIXEL) Search (PX). A Pixel is the smallest possible picture made by the computer (a 1 x 1 BOX).

Have you ever wanted to "sense" if a wall or another object is in your way? If so, a pixel search [PX(X,Y)] may be your answer!

Let's say you have a "BOX X,Y,10,10,3" that you are moving around the screen and you want to make sure that it will stay two pixels away from any wall inside of a maze. First let us check to the right and left of the box for a wall.

```
)100 IF (PX(X+7,Y))+(PX(X-8,Y))GOTO 200
```

Now let's break this line down! First you have an "IF-OR" (+) statement. By putting the statement PX(X+7,Y) inside parentheses, and adding a plus(+) then putting the next statement in parentheses you have said " If the pixel 7 pixels to the right of X OR the pixel 8 pixels to the left of X is ON (FC) then go to line 200. The reason that the number to the right of X is 1 digit smaller is that the number "0" is considered to be a positive number to the BALLY. If you put in BOX X,Y,1,1,3 you will see that it is 1 pixel to the right and 1 pixel up from exact center. If you want to put a box in the exact center you will either have to make the inside box 2 x 2 or make the outside box dimensions an odd number like 9 or 11!

One thing to remember is to divide the box size by 2 and add the number of spaces you want to "stay away" and then add 1 more to check for a pixel. For example, using the same box, you want to "hit" the edge of the wall. This is your line then:

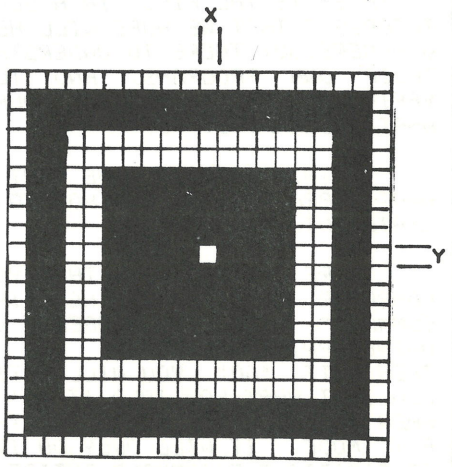
```
)100 IF (PX(X+5,Y))+(PX(X-6,Y))GOTO 250
```

Notice once again that the "negative" side is one number larger.

If you check the diagrams on the right you will see the way that the BALLY does PX search.

Remember that a background color (BC) pixel = 0!!!

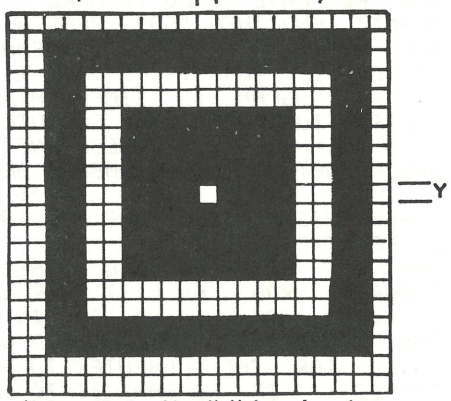
```
BC=7;FC=0;BOX X,Y,18,18,1;BOX
X,Y,14,14.2;BOX X,Y,10,10,1;
BOX X,Y,1,1,2
```



The center black (FC) box is the one described on the left. Note that the center "X,Y" box is not quite in the exact center of the rest.

PX(X,Y)=0

PX(X+5,Y)=0 PX(X,Y+7)=1
PX(X+7,Y)=1 PX(X-6,Y)=0
PX(X,Y+5)=0 PX(X,Y-6)=0
PX(X,Y-8)=1 PX(X-8,Y)=1



Note that the X,Y box is in the center of the BOX X,Y,9,9,1! Now you can say 'IF (PX(X+8,Y))+(PX(X-8,Y))GOTO n' OR you can say 'IF (PX(X,Y+8))+(PX(X,Y-8))GOTO n' In either case the 'IF-OR' statement will be 'TRUE' if there is any FC area two spaces away from the outside on the axis that doesn't have a number after it!!!!

```
BOX X,Y,17,17,1;BOX X,Y,13,13,2;
BOX X,Y,9,9,1;BOX X,Y,1,1,2
```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ARCADIAN

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WHAT IS A PROGRAM AND HOW CAN I USE IT??

DON GLADDEN

THIS IS THE FIRST IN A SERIES OF BEGINNER TUTORIALS THAT WE HOPE WILL HELP THE NEW PROGRAMMERS OUT THERE TO UNDERSTAND HOW TO WRITE THEIR OWN PROGRAMS, AND TO UNDERSTAND THE VARIOUS "TRICKS" TO MAKE YOUR ARCADE DO JUST WHAT YOU WANT IT TO!!!

IN THIS TUTORIAL, WE WANT TO EXPLAIN JUST WHAT A PROGRAM IS, AND HOW TO USE THE "PRINT" STATEMENT.

THERE ARE TWO WAYS THAT YOU CAN TELL YOUR COMPUTER TO DO SOMETHING. FIRST, THE "DIRECT COMMAND", (NO LINE NUMBER). KEY IN THE FOLLOWING: PRINT "HELLO"
THEN HIT "GO". YOU WILL NOTICE THE COMPUTER DID JUST WHAT YOU TOLD IT TO!! UNFORTUNATELY, WHEN YOU TELL IT TO DO SOMETHING IN THE DIRECT MODE, IT WILL ONLY DO IT ONCE, AND THEN IT FORGETS THE COMMAND ENTIRELY, SO YOU WOULD HAVE TO KEY IT IN AGAIN IF YOU WANTED THE COMPUTER TO PRINT IT AGAIN. THAT BRINGS US TO THE NEXT PART... LINE NUMBERS.

LET'S TELL THE COMPUTER TO DO THE SAME THING, BUT THIS TIME WE ARE GOING TO PUT A LINE NUMBER BEFORE THE COMMAND. KEY IN:
10 PRINT "HELLO"

NOW HIT "GO". YOU NOTICE THIS TIME WHEN WE HIT "GO", THE COMPUTER DID NOT DO A THING. WHY? BECAUSE WE DID NOT GIVE IT A DIRECT COMMAND THIS TIME, BUT INSTEAD, PUT IT IN A PROGRAM THAT IS STORED IN THE MEMORY. NOW, ALL WE HAVE TO DO TO MAKE IT WORK IS TO HIT "RUN", AND THEN "GO". PRESTO!! THERE IT IS!! AND NOW THAT IT IS IN MEMORY, ALL WE HAVE TO DO IS "RUN" IT AS MANY TIMES AS WE WISH. SO A PROGRAM IS SIMPLY A NUMBERED LIST OF INSTRUCTIONS FOR THE COMPUTER TO FOLLOW. IT WILL ALWAYS FOLLOW THESE INSTRUCTIONS IN THE ORDER THAT THE LINE NUMBERS ARE IN.

ADD THIS LINE TO YOUR PROGRAM:
20 PRINT "THERE"
NOW HIT "LIST" AND "GO". THERE IS YOUR WHOLE PROGRAM. YOU CAN LIST A PROGRAM AT ANY TIME TO SEE WHAT YOU'VE GOT IN THE MEMORY. NOW RUN THE PROGRAM. ALL WE DID WAS ADD ONE MORE THING FOR THE COMPUTER TO PRINT, AND THERE IT IS!!! IF WE WANT IT TO KEEP ON RUNNING, ALL WE HAVE TO DO IS ADD LINE 30:
30 GOTO 10
NOW THE PROGRAM WILL RUN UNTIL WE PRESS THE "HALT" KEY TO STOP IT, BECAUSE IT IS FOLLOWING OUR INSTRUCTION TO THE "T". LIST IT AGAIN AND THINK JUST LIKE THE COMPUTER DOES. FIRST, PRINT "HELLO", THEN PRINT "THERE", THEN GO BACK TO LINE 10 AND DO IT AGAIN.

NOW LET'S COVER THE "PRINT" STATEMENT AND WHAT WE CAN DO WITH IT.

WHEN WE ARE PRINTING TEXT, (WORDS,ETC.) WE HAVE TO USE QUOTATION MARKS AS WE DID IN THE EXAMPLES ABOVE. WE CAN ALSO USE A COMMA TO TELL THE COMPUTER THAT WE WANT IT TO PRINT THE NEXT STATEMENT ON THE SAME LINE. CHANGE LINE 10 AS FOLLOWS: (JUST TYPE IT OVER AGAIN FOR NOW)
10 PRINT "HELLO ",
NOW LIST YOUR PROGRAM TO MAKE SURE LINE 10 HAS BEEN CHANGED. THEN, IF IT'S O.K., RUN THE PROGRAM. YOU NOTICE THAT NOW WE GET BOTH WORDS ON THE SAME LINE. ALL BECAUSE WE ADDED THE COMMA. HANDY!!!

CX & CY: THESE ARE "TWO-LETTER VARIABLES" THAT WE CAN USE TO TELL THE ASTROCADE EXACTLY WHERE ON THE SCREEN TO PRINT A MESSAGE. TO USE THEM, WE HAVE TO DO A BIT OF CALCULATING. THE "CX" TELLS THE ARCADE WHERE TO START PRINTING HORIZONITALLY, AND "CY" VERTICALLY. REMEMBER THIS: THE VERY CENTER OF THE SCREEN, BOTH HORIZONITALLY AND VERTICALLY, IS ALWAYS ZERO. FROM THIS POINT, WE SUBTRACT ONE FOR EACH PIXEL THAT WE WANT TO SHIFT TO THE LEFT (CX), OR DOWN (CY), AND ADD ONE FOR EACH PIXEL TO THE RIGHT (CX), OR UP (CY).
RESET YOUR ARCADE, AND ENTER THE FOLLOWING:

```
10 CLEAR                (CLEAR SCREEN)
20CX=0                  (SET HOR. TO CENTER)
30CY=0                  (SET VER. TO CENTER)
40PRINT "HELLO"
```

NOW RUN THE PROGRAM. YOU NOTICE THAT THE COMPUTER STARTED THE PRINTING IN THE CENTER OF THE SCREEN, RIGHT WHERE WE TOLD IT TO. TRY DIFFERENT VALUES FOR CX & CY AND NOTICE WHERE IT DOES THE PRINTING. YOU CAN USE ANY NUMBER FOR CX BETWEEN -80 AND 79, CY BETWEEN -44 AND 43. THIS RANGE ALLOWS YOU TO START YOUR PRINTING ANYWHERE ON THE SCREEN THAT YOU WANT.

A HANDY FORMULA FOR CALCULATING THE "CX" VALUE TO CENTER YOUR WORD(S) HORIZONTALLY IS: CX=-(C*6-2) WHERE "C" IS THE NUMBER OF CHARACTERS IN THE TEXT THAT YOU WANT PRINTED. ("C" CANNOT BE MORE THAN 26 FOR ONE LINE.)

OUR NEXT BEGINNER TUTORIAL WILL COVER VARIABLES AND PRINTING OF NUMBERS.

DON GLADDEN
59400 NINE MILE RD.
SOUTH LYON, MI 48178
(313) 437-3984

A SHORT PROGRAM DESIGNED TO DRIVE YOUR ARCADE CRAZY!!!-DON GLADDEN

```
10 LIST :LIST
20 FOR A=0TO 23:IF (A=8)+(A=13)NEXT A
30 &(A)=RND (999):NEXT A:GOTO 10
```

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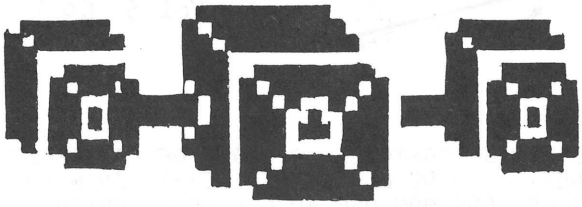
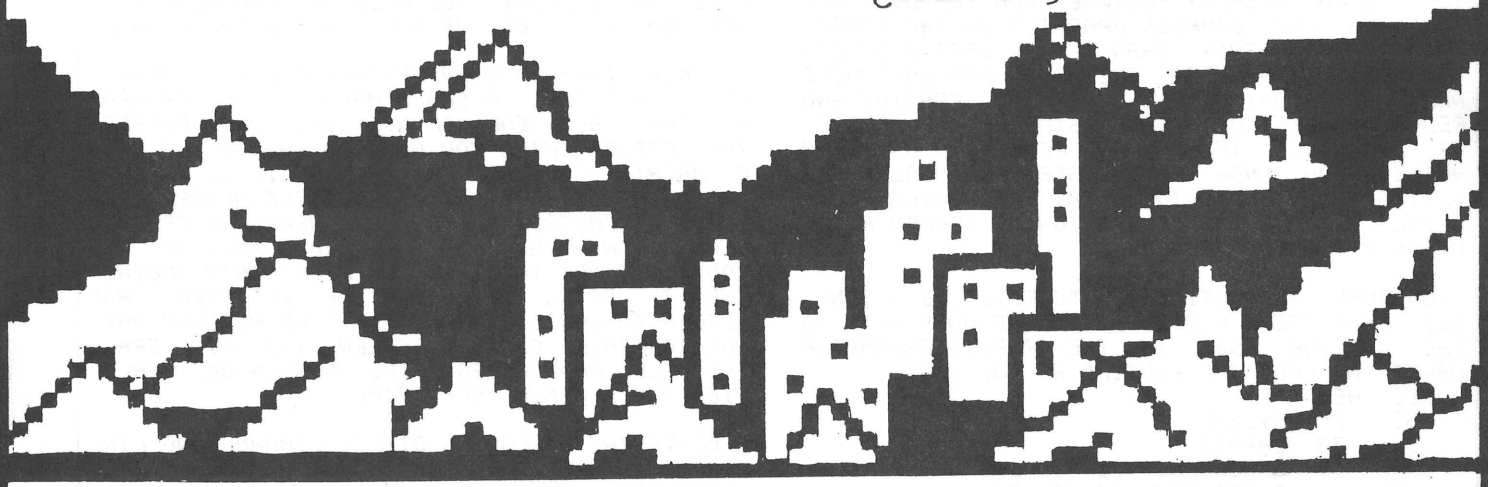
EXITORS REVENGE



Exitor's 5 Warriors



Smooth Motion

Machine Graphics

You are the commander of the underground MX missile, defense for the top secret facility, which is code named Akreon. This is where our first interstellar star drive is being constructed. You are alerted to the presence of an object coming in from outer space. You immediately recognize it as a battle star of alien origin. You take control of the MX system, positioning the launcher, firing the missiles and guiding them to target, destroying the warriors before they can radio important data to the enemy battle star. LOOKOUT!!! The battle star will fire back.

Exitor smiled to himself as he settled the huge ship into a parking orbit, well above the sprawling complex. It will be easy, he thought, as he armed the triple photon lazers. First release the reconnaisance pods, the warriors survey the area, then destroy the star drive factory.

Exitor yearned for revenge. He and his crew had suffered heavy damage on an earlier earth scouting mission when his ship collided with an earth sattelite, causing a gigantic explosion.

Exitor had journeyed several hundred light years to stop the development of a star drive, by which the earth people could travel to distant galaxies. BUT!! he doesn't realize your underground MX system is there.

Can you save Akreon from destruction and in so doing, pave the way for travel to the stars?

Normally, a picture this detailed in 3-dimension would require more memory than is available in the Astrocade program section. We have utilized a special arcade feature called mass screen memory. There is almost 4K of memory available in this way. The game operation is contained in the 1.8K program memory section, while the machine graphic utilize specially encoded memory sections. By using all three in a unique way this game, with expanded graphics and smooth flowing motion, is possible. It is equivalent to about 6K of memory.

A special note of thanks to Andy Guevera of Bit Fiddlers, without whose help this game could not have been.

Tape Cassette # 16

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ARCADIAN

Nov 5, 1982

Vol 5 No 1

"CHRDIS"
BY MIKE SKALA

I'VE SEEN QUITE A BIT OF SOFTWARE LATELY UTILIZING THE "GRAPHIC CHARACTER MAKER", A MACHINE CODE ROUTINE THAT "ARCADIAN" HAS PUBLISHED IN THE PAST YEAR. THIS ALLOWED US TO USE A DISPLAY ROUTINE FROM THE ON-BOARD ROM AND PUT COMPLEX GRAPHICS ON THE SCREEN INSTANTLY, RATHER THAN A SLOW SERIES OF BOX AND LINE COMMANDS. THE MAJOR DRAWBACK HERE WAS WHEN MOVING THE GRAPHICS, ERASING AND REDRAWING LEFT US WITH CONSIDERABLE FLASHING OR BLINKING. IF YOU HAVE BEEN WITH US FOR A WHILE, YOU KNOW THAT WE ARE CONTINUALLY EVOLVING AND IMPROVING. THE FOLLOWING TUTORIAL IS OUR NEW GENERATION OF SCREEN ANIMATION FOR THE ASTROCADE!!!

ON-BOARD SUBROUTINE #51,"CHRDIS",IS A SINGLE CHARACTER DISPLAY ROUTINE MUCH AKIN TO THE ROUTINE USED IN THE GRAPHIC CHARACTER MAKER. WE CALL THE ROUTINE AS FOLLOWS:

DEC	HEX	
255	FF	SYSSUK
51	33	CHRDIS
N	N	E-HOR POS. (0-159 DEC.)
N	N	D-VER POS. (0-99 DEC.)
N	N	C-CHAR DISPLAY PARAMETER
N	N	A-CHAR TO CALL

SYSSUK/CHRDIS--ANY ON-BOARD SUBROUTINE CAN BE CALLED IN ONE OF TWO WAYS:"SYSTEM" ASSUMES ALL NECCESARY INFO IS ALREADY IN THE REGISTERS. (MEMORY CELLS WITHIN THE C.P.U.) "SYSSUK" MEANS THE INFO WILL BE DIRECTLY FOLLOWING THE CALL, AND BE "SUCKED" IN.

E--THIS REGISTER IS THE HORIZONTAL COORDINATE FOR YOUR GRAPHIC. ZERO IS THE LEFT SIDE OF THE SCREEN, AND 159 IS THE RIGHT SIDE. IF YOU GO PAST 159, THE GRAPHIC WILL REAPPEAR ON THE LEFT SIDE, ONE PIXEL LOWER. THIS IS FINE UNTIL YOU REACH 256, ABOUT HALF WAY ACROSS THE SCREEN, WHERE IT WILL AGAIN DROP ONE PIXEL DOWN AND BACK OVER TO THE LEFT SIDE OF THE SCREEN. FOR THIS REASON, IT IS BEST TO LIMIT-CHECK THE GRAPHIC TO BETWEEN 0 AND 159.

D--THIS REGISTER IS THE VERTICAL COORDINATE. ZERO IS THE TOP OF THE SCREEN, 99 THE BOTTOM. BE CAREFUL NOT TO RUN YOUR GRAPH DOWN INTO THE SCRATCHPAD AREA HIDDEN AT THE BOTTOM OF THE SCREEN. LIMIT-CHECK YOUR GRAPHIC AGAIN NOT TO RUN OFF THE BOTTOM, OR THE WHOLE PROGRAM MIGHT CRASH!!
HERE'S SOMETHING INTERESTING: THERE IS A WHOLE OTHER SCREEN ABOVE THE ONE WE NORMALLY SEE. YOU'LL NEVER SEE IT, BUT YOU CAN MOVE THINGS AROUND UP THERE WITH NEGATIVE VALUES IN THIS REGISTER. YOU COULD, FOR EXAMPLE, START A GRAPHIC UP THERE AND HAVE IT FALL DOWN INTO THE VISIBLE SCREEN.

C--THIS CONTROLS A LOT OF INTERESTING THINGS, AND WE'LL GO INTO DETAIL IN A FUTURE ARTICLE. FOR NOW USE 40 (28 HEX), WHICH GIVES US AN XOR WRITE.

A--THIS IS WHICH CHARACTER WE ARE GOING TO DISPLAY. IT RESPONDS TO THE STANDARD ASCII CODE TO DISPLAY ALL RESIDENT CHARACTERS, 0 THROUGH 127, OR OUR OWN THAT WE CAN CREATE.

NOW THAT YOU UNDERSTAND ALL THAT STUFF, LET'S ASSEMBLE A SMALL MACHINE CODE PROGRAM AT THE BACK END OF OUR LINE INPUT BUFFER. THE FIRST THING YOU MUST DO WHEN GOING INTO A MACHINE CODE PROGRAM FROM BASIC IS TO SAVE THE DE REGISTER. THIS IS A LITTLE MEMORY CELL THAT REMEMBERS WHERE YOU WERE BEFORE YOU LEFT. NOW WE GO INTO OUR CHRDIS ROUTINE. NOW COMES THE NEW TWIST: WE GO RIGHT INTO ANOTHER CHRDIS, BRING BACK OUR DE REGISTER, AND RETURN TO BASIC. THERFORE, IF WE ALREADY HAVE OUR GRAPHIC ON THE SCREEN, THIS WILL ERASE THE OLD AND REDRAW THE NEW IN ONE CALL, YIELDING MINIMUM "OFF" TIME.

ENTER THE FOLLOWING DIRECT COMMAND (NO LINE NUMBER), AND THEN INPUT THE DECIMAL VALUES LISTED BELOW:

```
NT=1:FOR A=20241TO 20257:PRINT A,:INPUT
"   ",B:%(A)=B:PRINT :NEXT A
```

	DEC	HEX	
%(20241)=	213	D5	PUSH DE
%(20242)=	255	FF	SYSSUK
%(20243)=	51	33	CHRDIS
%(20244)=	0	0	E (HOR.)
%(20245)=	0	0	D (VER.)
%(20246)=	40	28	C
%(20247)=	0	0	A (CHAR#)
%(20248)=	0	0	NOP (NO OPERATION)
%(20249)=	255	FF	SYSSUK
%(20250)=	51	33	CHRDIS
%(20251)=	0	0	E (HOR.)
%(20252)=	0	0	D (VER.)
%(20253)=	40	28	C
%(20254)=	0	0	A (CHAR#)
%(20255)=	0	0	NOP
%(20256)=	209	D1	POP DE
%(20257)=	201	C9	RET

NOW WE NEED A LITTLE BASIC PROGRAM TO MANIPULATE ALL THIS STUFF. ENTER THE FOLLOWING:

```
10 %(20244)=-9999:V=0:H=0
20 V=V-JY(1):H=H+JX(1)
30 IF V<0V=0
40 IF V>75V=75
50 IF H<0H=0
60 IF H>159H=159
70 %(20251)=Vx256+H
80 C=&(28)÷65+94:%(20254)=C
90 CALL20241:%(20244)=%(20251):%(20247)=C:
GOTO 20
```

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LINE 10:WE SET THE COORDINATES FOR THE FIRST CHRDIS UPSTAIRS SOMEWHERE OUT OF SIGHT, AND THEN THE SECOND CHRDIS WILL DRAW THE INITIAL GRAPHIC. THIS LINE IS ONLY RUN ONCE, AFTER WHICH THE PROGRAM WILL USE THE FIRST CHRDIS TO ERASE THE OLD GRAPHIC. LETTER VARIABLES V AND H ARE ALSO ZEROED OUT HERE.

LINE 20:PROGRAM READS THE JOYSTICKS TO UPDATE VARIABLES USED FOR VERTICAL AND HORIZONITAL COORDINATES.

LINES 30-60:LIMIT CHECKS THE GRAPHIC TO KEEP IT ON THE SCREEN.

LINE 70:HERE IS WHERE THE NEW COORDINATES ARE PLUGGED INTO OUR SECOND CHRDIS. SINCE ANY POKE WORKS ON TWO MEMORY LOCATIONS, WE MUST USE THE FORMAT Vb256+H.

LINE 80:KNC( ) IS READ, AND VARIABLE C WILL BE SET TO 94,95,96 OR 97. THESE ARE THE ASCII VALUES FOR THE FOUR ARROWS FOUND ON OUR KEYPAD. THIS VALUE IS THEN POKED INTO THE CHAR# POSITION OF OUR SECOND CHRDIS. IN CASE YOU'VE WONDERED WHY A "NOP" FOLLOWED THE A REGISTER IN BOTH CHRDIS'S, IT'S AGAIN BECAUSE OF OUR POKE SITUATION. A NOP IS A MACHINE CODE COMMAND THAT DOES ABSOLUTELY NOTHING EXCEPT WASTE A BYTE. WERE IT NOT THERE IN THIS PROGRAM, WE SIMPLY COULD NOT POKE IN OUR ASCII VALUE. WE WOULD INSTEAD END UP WITH SOME LARGE NEGATIVE NUMBER TO POKE IN, AND THE FIRST AND SECOND CHRDIS'S WOULD REQUIRE DIFFERENT FUDGE FACTORS.

LINE 90:THE MACHINE CODE PROGRAM IS NOW CALLED, THE OLD COORDINATES ARE SET EQUAL TO THE NEW ONES, THE OLD CHAR# IS SET EQUAL TO THE NEW ONE, AND THE PROGRAM LOOPS BACK TO LINE 20.

I WOULD SUGGEST THAT YOU DUMP THE PROGRAM TO TAPE BEFORE YOU RUN IT, BECAUSE ONE LITTLE MISTAKE WITH MACHINE CODE CAN CAUSE BIG PROBLEMS. TO DUMP, USE THE FOLLOWING COMMAND:

```
:PRINT #:PRINT #(26241),17
```

TO LOAD IT BACK FROM TAPE, USE:

```
:INPUT#:INPUT #(26241)
```

RUN THE PROGRAM AND FIDDLE WITH THE JOYSTICK AND KNOB. I'LL ADMIT IT ISN'T A GAME OR LOTS OF FUN, BUT IT DEMONSTRATES A FAIRLY SIMPLE MEANS OF SMOOTH ANIMATION. THIS WILL WORK WITH HOMEMADE CHARACTERS AS WE DID WITH THE GRAPHIC CHARACTER MAKER, AND THIS WILL BE COVERED IN THE NEXT TUTORIAL.

ONE MAJOR PRECAUTION MUST BE OBSERVED WITH THIS ROUTINE. WHEN USING THE NEW ASTRO BASIC, THE PROGRAM ACTIVELY USES THE 104 BYTE LINE INPUT BUFFER. SINCE WE HAVE STORED OUR MACHINE CODE IN THE LAST 17 BYTES OF THE BUFFER, NO LINE IN OUR BASIC PROGRAM CAN BE MORE THAN 87 BYTES LONG!!!!!

YOU WILL NOTICE A SLIGHT FLICKER OF OUR GRAPHIC. THIS HAS SOMETHING TO DO WITH TIMING OR SCREEN INTERRUPTS OR SOMETHING, I DON'T KNOW I'M SURE SOMEONE OUT THERE KNOWS THE CURE, SO PLEASE WRITE IN!!

VARIATIONS:

"WRAPAROUND"

```
30 IF V<0V=75
40 IF V>75V=0
50 IF H<0H=159
60 IF H>159H=0
```

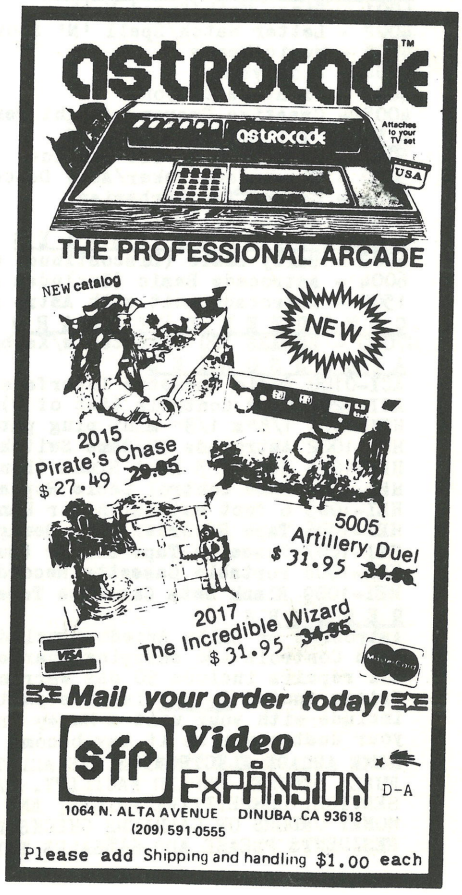
"BIG TIME"

```
5 %(20246)=168:%(20253)=169
40 IF V>65V=65
```

"LETTER DROP"

```
80 C=&(28)c3+33:%(20254)=C
90 CALL20241:%(20244)=%(20251):%(20247)=C: IF TR( )GOTO 10
100 GOTO 20
```

MIKE SKALA
544 E. OVERLOOK
EASTLAKE, OH
44094



c R.Fabris 1982

Nov 5, 1982 Vol 5 No 1

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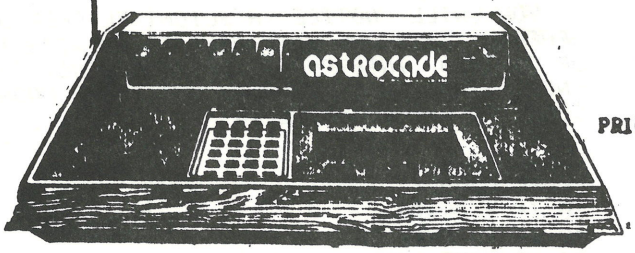

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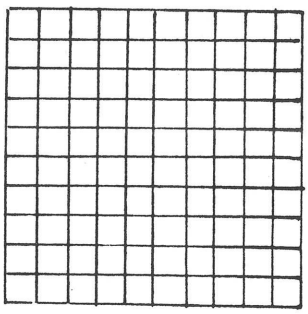
```
  1 .
  2 .
  3 .
  6 .PROG.M-I "FIND YOGI"
  7 .S.KENDALL
 10 D=0;C=0;G=0;F=0;J=0
 20 BC=121;FC=127
 30 CLEAR ;L=4;NT=3
 40 PRINT "* FIND
 50 PRINT "YOGI *
 60 Q=29;V=37
 80 FOR X=-80TO 160÷L-80
 82 MU=RND (80)
 90 FOR Y=QTO 43
100 IF PX(X,Y)BOX (X+81)×L-79,(Y-V)×L,L,L,1
110 NEXT Y;NEXT X
140 GOTO 1030
150 BC=127;FC=121
152 CX=-40;CY=30
154 PRINT "   FIND YOGI
160 CY=5
170 PRINT "       ?
180 CX=-46;CY=-40
190 PRINT " ON A 10×10 GRID
200 FOR A=-20TO 20STEP 5
210 BOX A,0,1,40,1
220 NEXT A
230 FOR B=-20TO 20STEP 5
240 BOX 0,B,40,1,1
250 NEXT B
260 GOSUB 3000;CLEAR ;RETURN
300 BOX 0,2,48,20,3
310 BOX 0,6,4,8,3
320 BOX 0,-5,24,2,3
330 BOX 0,16,32,8,3
340 BOX 0,24,24,8,3
350 BOX -8,16,4,4,3;BOX 8,16,4,4,3
360 BOX 0,20,56,1,1
370 BOX -8,16,1,1,3
380 BOX 8,16,1,1,3
390 BOX 0,-12,16,8,3
400 BOX 0,-28,64,24,3
410 BOX -24,-28,1,24,3
420 BOX 24,-28,1,24,3
470 BOX 14,-2,3,3,3
480 BOX -14,-2,3,3,3
500 GOSUB 3000
510 CLEAR ;RETURN
1030 NT=0;CLEAR
1035 GOSUB 150
1040 CX=-50;CY=20
1050 PRINT "F I N D  Y O G I
1070 G=G+1
1080 A=RND (9);B=RND (9)
1090 FOR K=1TO 5
1092 PRINT ;GOSUB 3020;CX=-60
1100 PRINT "GUESS X & Y
1102 X=KP-48;Y=KP-48;CLEAR
1110 PRINT "GUESS # ",#2,K," = ",#1,X,",",#2,Y
1115 PRINT
1120 IF Y=A IF X=B GOTO 1210
1130 GOSUB 1280;NEXT K
1150 BC=69;FC=24;CY=0
1152 NT=18;PRINT "50 50 20010000";NT=0
1160 PRINT "SORRY! THAT'S 5 GUESSES!"
1162 PRINT
1170 PRINT "YOGI WAS @",#2,A,",",#3,B
1175 PRINT ;GOSUB 3020
1180 PRINT ;PRINT "PLAY AGAIN? Y(1) N(4)"
1190 Z=KP-48;CLEAR
1200 IF Z=1 GOTO 1030
1205 IF Z=4 GOTO 1440
1210 CLEAR ;NT=12;BC=127;FC=121
1218 FOR A=1TO 2
1220 PRINT "305003405000000
1222 NEXT A;NT=0;CLEAR
1224 CX=-40;CY=-40
1230 PRINT "YOU FOUND YOGI
1232 GOSUB 300;PRINT ;CX=-60
1234 PRINT "IN ",#2,K,#2," TRIES
1240 PRINT ;PRINT "WHO WON? PLAYER 1 OR 2
1250 P=KP-48
1254 IF P>2PRINT "REENTER";GOTO 1240
1260 IF P=1 GOTO 1380
1270 IF P=2GOTO 1410
1280 IF X=B PRINT "X OK"; GOTO 1320
1290 IF X<B GOTO 1310
1300 PRINT "GO SOUTH -X"; GOTO 1320
1310 PRINT "GO NORTH +X"
1320 IF Y=A PRINT "Y OK"; GOTO 1370
1330 IF Y<A GOTO 1360
1340 PRINT "GO WEST -Y"
1350 GOTO 1370
1360 PRINT "GO EAST +Y"
1370 RETURN
1380 D=D+1
1390 PRINT "# OF TRIES";E=KP-48
1400 F=F+E;GOTO 1180
1410 C=C+1
1420 PRINT "# OF TRIES";H=KP-48
1430 J=J+H;GOTO 1180
1440 PRINT "PLAYER #1 WON",#2,D,#2," GAMES
1450 PRINT "WITH ",#2,F,#2," TRIES
1460 PRINT "PLAYER #2 WON ",#2,C,#2," GAMES
1470 PRINT "WITH ",#2,J,#2," TRIES
1480 PRINT "    TOTAL GAMES =",#2,G
1485 PRINT ;PRINT
1490 CX=-60
1500 PRINT "E N D  OF  Y O G I
1510 STOP
3000 FOR Z=1TO 1200;NEXT Z;RETURN
3020 BC=RND (17)×8+116;FC=BC+4;RETURN
3030 .:RETURN ;RUN GO
```



The computer puts up a 10 x 10 grid and hides "YOGI" somewhere. You input your guess as to his location using X and Y coordinates. The computer will respond with a direction to try. The computer will keep track of the number of times it takes you to guess YOGI's location.

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Nov 5, 1982

R & L ENTERPRISES

Vol 5 No 1

PRESENTS

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Dealer inquiries invited / Group purchase rates available.

We recommend Blue Ram BASIC 1.1 for the easiest use of this board. Simple access routines are provided for use with BB/AB.

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ARCADIAN

Vol 5 No 1 Nov 5, 1982

THE GAME PLAYER

by Michael Prosise

OMEGA VALLEY and ASTRO TERROR/ THE TINY ARCADE/ Tape #T-101

Rich in color and good in graphics, OMEGA VALLEY provides the player with not only a fine space game, but a unique one too; for in this one-player science fiction space battle one must defend three "valleys" at one time, with the catch being that you may only cue-up one valley at a time on your television screen.

Each valley is identical in design, with four laser cannons, two on each side, that fire across the valley in an attempt to destroy the eighteen invader ships (six per valley) before they land.

The three valleys are named "Alpha", a green valley, "Delta", a red valley, and "Omega", a blue valley. To select a view of a particular valley, you simply press the corresponding color shift key (on the keypad). In addition, the four laser cannons are also controlled by the keypad. The hand controls are not used.

Points are scored by destroying the alien ships before they land, with bonus points available under certain conditions. But beware! If three ships manage to land, they win (and they will tell you so, too!). After the first wave of intruders are eliminated, another eighteen appear, spread further apart and descending at a faster rate. The pace steadily picks up as the game progresses, and you find yourself frantically switching back and forth from one valley to the next and back again, trying desperately to fire on the alien space ships before they land three of their units and declare victory over you.

On side two of this cassette you find ASTRO TERROR, a very fast-paced, intense, non-stop action game, in which you sit at the controls of a space station, monitoring on your viewer screen the vast portals of space. Your mission is to destroy the alien force ("the in-organic Vultor") when it appears on the screen, by punching in the alien's position coordinates on the computer keypad. The coordinates are where your deflector beam will hit when you fire.

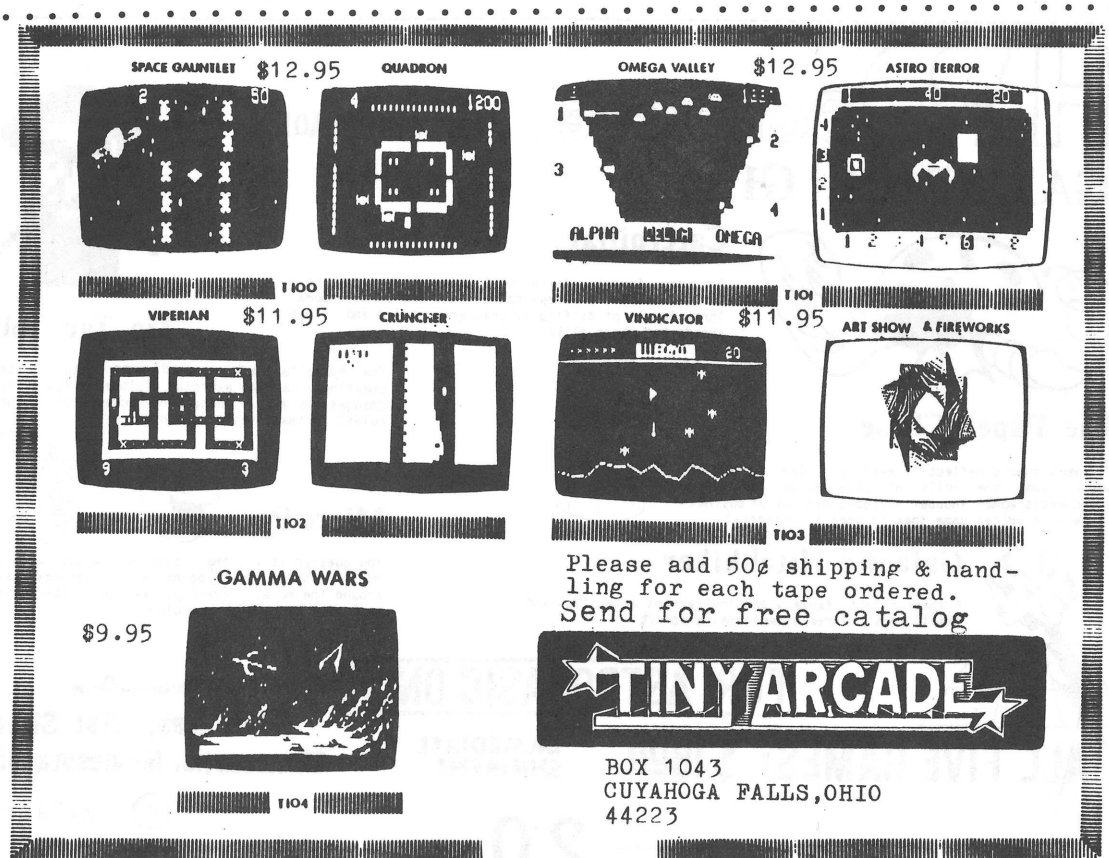
As outlined in the instructions, the Arcade keypad serves as the command console of the space station. To hit the enemy objects, you must enter the coordinates of the target on the keypad, then fire your deflector beam. This may sound simple, but it is not, for the target, which is actually a bomb coming right for you, is constantly moving, making it quite a challange to predict the proper coordinates. The game's programer only gives you three space stations, so, unless you are extremely fast, the game ends quite quickly.

This is perhaps the only "flaw" in ASTRO TERROR, that the action is so fast one does not have a chance to get used to the game and develop a skill for predicting and punching-in coordinates. Thus, I predict that a lot of folks will find the game a bit frustrating.

Fortunately, however, you are given "shields" to protect yourself with. The shields will vaporize incoming bombs. You start the game with 100 shield units. Each hit you absorb will weaken them by 10 units. Once the shields are gone, it's goodbye space station.

In additon to having bombs hurled at you, there is also on your screen an enemy space station, constantly on the move, which, unless you destoy it, will fire an annihilation ray at you, for which you have no defense.

As a whole, ASTRO TERROR and OMEGA VALLEY combine to make a pretty good game cassette. ASTRO TERROR has some fantastic sound effects, and as mentioned previously, OMEGA VALLEY is quite colorful. In addition, both provide excitement, and also help the Arcade owner become a little more familiar with the keypad. ■



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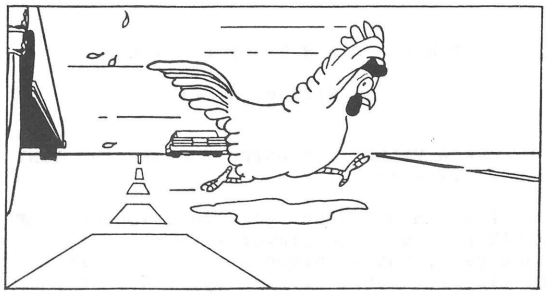

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Caterpillar

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The Paper Chase

TV games should reflect TV reality. Can Mr. Whipple snatch away the rolls of toilet paper before the treacherous woman shopper squeezes him out of business? It makes a better game than it does a commercial.

Micro Pac

You guessed it ... the little yellow guy with the big mouth gobbles jelly beans as the ghosts chase him around the maze. Frankly, we don't think this game will ever become very popular.

Galactic Hitchhiker

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Vol 5 No 1

Nov 5, 1982

WELCOME TO THE ARCADIAN! With this first issue of Volume 5, we are instituting a Newsletter of larger capacity than previously. Always dynamic, we are trying to reflect the needs and desires of our subscribers, so we will have a continuing series of tutorials - somewhat more formal than previous efforts primarily because Don Gladden will be expending his energies in bringing subjects and authors together with a long-term schedule so as to have organization. If you are interested in being an author of such material - and we are paying authors of tutorial material - contact Don at 59400 Nine Mile Rd., South Lyon, MI 48178. In addition, he wants to receive your suggestions for subjects - areas that need clarification in your mind. If it is more convenient, you can contact me as well. We plan to have a three-tier system, for Beginner, Intermediate, and Advanced programmer. In addition to this regularly-scheduled set of tutorials, we will also include, as opportunity will have it, other material of tutorial or technical nature, be it software (programming techniques), or hardware (modifications or additions).

A LITTLE HISTORY For those of you just starting with us, we need to tell you a little about the situation. The Arcade machine was developed for Bally Manufacturing, the pin ball, arcade game, and slot machine firm, and marketed in late 1977. The first Basic cartridge appeared in mid-1978, and the ARCADIAN was started in Nov 1978. A number of management shifts took place, and still are. About a year ago, a new Basic cartridge was introduced, which was caused us a minor problem (and will be discussed later)

REVIEWS ARE COMING on the following products:

1. ASSEMBLER by General Video - a multiprogram system on tape, with a new keypad overlay, to assist in creating object code programs (requires extended memory)

2. MEMORY ADDITION by R & L Enterprises. This board allows the addition of up to 64K of memory in 2K increments as necessity amd finances allow. Includes the 50-pin bus as an output allowing connection of new or existing devices.

Samples of these items were received a few days ago, and are now in the hands of our capable reviewers.

ASTRO BASIC, Bally Basic ?? Newcomers will find reference to these two terms frequently. We have dubbed the original Basic Videocade as the "Bally Basic" or BB, and the current Videocade as "Astro Basic" or AB. This new version has a couple of features that make it more convenient to program, but in converting the cartridge, something had to be left out. As a result, there are some programs, written on one 'dialect', that will not operate properly (or at all) in the other. We now identify each program printed in the ARCADIAN with an BB or AB (or both) to indicate which cartridge is needed. Of course, each program printed in the first three years is automatically BB, but we have found that only a few will not operate in AB as well - tho maybe the music might sound funny.

TAPE RECORDER UPDATE The Michael Prosise article on tape recording problems on page 110 of the last Volume provided a couple of recommended units. We have since received a few more names and these are indicated here.
Panasonic RQ-2734 (Slimline) / Radio Shack CTR-41 / GE#3-5152B / GE#3-5105F / GE#3-5001B / Sears #564.21570050 / Craig #2106.

WORDHUNT OMISSION I inadvertently left out the values of the variables in last month's program:
H=500;Z=-24574; D=1000;F=2000;G=3000;O=3040
Here are some instructions to allow you to save the program on tape, first in Bally Basic (BB)
Load the program as listed.
Type in the following unnumbered statement
NT=0;:PRINT;LIST;PRINT"BC=17;
FC=101;H=500;Z=-24574;D=1000;
F=2000;G=3000;O=3040;:RETURN;RUN"
Start tape in RECORD mode.
Press GO
Load the computer from the tape in the regular way and it will self-start.

And now in Astro Basic (AB)
Add the following numbered statement to the program 2 &(9)=191
Type in the following unnumbered statement
BC=17;FC=101;H=500;Z=-24574;
D=1000;F=2000;G=3000;O=3040
Press GO
Type :PRINT
Start tape in Record mode.
Press GO
Load the computer from the tape with :INPUT;RUN GO for autostart.

3x5 CHARACTER SET is a tutorial designed to allow more text on the screen, developed by Craig Anderson of Hoover-Anderson. We have a review of this tutorial by Al Rathmell:

"This system for character generation is well documented, easy to implement, and it works. The software has some value in illustrating Basic graphics programming techniques, but because the characters are formed using the BOX command to display each pixel of the 3x5 dot matrix that describes the character, it operates rather slowly. The program is written in the Basic language and will work with either Bally or Astro Basic. A data base of 64 words is used to define the 64 characters in the 3x5 set. The data can be stored in the @ array of Bally Basic, the * array of Astro Basic, or in any add-on memory. To be of any practical use, (that is, to write a full screen of small characters - as opposed to notes here and there on a game field) the character generator should be written in machine language as suggested in the documentation. "

3x5 CHARACTER SET

Listing and tutorial only $5

HRD Software

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Hoover-Anderson Research and Design
2206 WEST 21st STREET
MINNEAPOLIS MINNESOTA 55405

ADS

SWBX-2 Allows continuous connection of the Astrocade to your tape recorder. No mods., No interference!. Change from :PRINT to :INPUT with flip of toggle switch. Includes speaker and volume control to monitor signal or locate program. 90 day warranty. $17. ppd -R. Pease 340 E. 4 Ave., Stanley WI 54768

FOR SALE One used Arcade w/2 controllers. Unit needs repair, power supply/circuit out. As is, postage paid -$50. Stan Ramstead, 1064 N. Alta, Dinuba, CA 93618 209-591-0555

High Quality Tape C-10/$.60 C-20/ $.95 C-30/$1.05 C-60/$1.25 plus $.30 each postage. Catalog includes two free games..$.50 Steve Birney/Esquire Computing 4578 Adams Dr., Concord, Ca 94521

FOR SALE In new condition with On/Off light-Arcade, Basic, 2 controllers, Blue Ram, SBattle /Football/ 280Z /BJack/ Poker/ SWolf/ TBaseball/ Tennis/ Hockey/ Handball, plus 6 tapes of software. $425. W York. POBox 4700 El Paso TX 79914

FOR SALE Bally Cassette Interface, original carton, $42 or best offer G. Riegel RD#3 Box 222 Owego, NY 13827

TRADE Star Battle for any of- Pinball, Football, Space Fortress, or Baseball/Tennis/Hockey/Handball. M. Perrus 5456 Harpers Farm Rd. Columbia, MD 21044

FOR SALE Arcade with new Basic and 2 controllers. Less than 1 year old, A-1 shape. Will include copies of ARCADIAN and Bally literature. $199. D. Witczak 326 Joe McCarthy Buffalo, NY 14150 716-691-7671

FOR SALE Arcade w/4 controllers, BBasic, CInterface, BallyCheck cart., 4001 EMath, 2009 ABattle, 3001 TBaseball, 2002 Seawolf First money order or cert check for $400 takes it (ppd) K J McKeown- McNamara 818 Bay Ridge Ave, Brooklyn, NY 11220

FOR SALE 1982 Arcade - 3 months left on warranty. 2 ABasic/ Galaxian/ ABattle/ Space Fortress/ BPin/ S Battle plus Vol 4 of ARCADIAN $295 Ron Sedlak 15 Howell Ave., Piscataway, NJ 201-326-2223(day)

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The ARCADIAN

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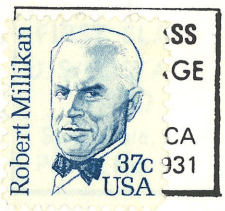

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